The Effective Use of Data to Help Make Informed Decisions

Jessica Josselyn October 23, 2014

Performance Measurement 101

"A process of assessing progress toward achieving predetermined goals."

http://www.ops.fhwa.dot.gov/perf_measurement/fundamentals/index.htm



The Link Between Data and Decision-Making

Collect Data

Measure Progress Make Informed Decisions

In general, a good measure:

- > Is accepted by and meaningful to the customer
- Tells how well goals and objectives are being met
- > Is simple, understandable, logical, and repeatable
- > Shows a trend
- > Is specific, timely and sensitive
- > Allows for economical data collection

Why Use a Performance Based Approach to Planning and Programming?

- > Improved system performance
- > Improved investment decision making
- > Better return on investment
- > Effective resource allocation
- > Increase accountability and transparency
- > Demonstrate linkage between funding and performance

Steps in Performance Based Planning

- 1. Goal Setting and Development of Objectives
- 2. Establishment of Performance Measures
 - National Performance Measures
 - State Performance Measures (consulting MPOs and transit)
- 3. Development of Appropriate Targets
 - Fiscally constrained targets
 - Aspirational targets
- 4. Strategy Identification and Analysis
- Ongoing Monitoring, Performance Reporting, and Evaluation



SOUTHEAST FLORIDA APPLICATIONS



Regional Application

www.SEFTC.org

Metropolitan Planning Organizations

- Miami-Dade
- Broward
- Palm Beach

Department of Transportation

- Districts 4 and 6
- Turnpike

Regional Planning Councils

- South Florida
- Treasure Coast

Transit Agencies

- MDT
- BCT
- Palm Tran
- SFRTA







Regional Application

www.SEFTC.org

SOUTHEAST FLORIDA REGIONAL TRANSPORTATION SYSTEM MEASURES

Outcomes Assessment Annual Report 2006 through 2010 Reporting Period





Performance Measurement required by Southeast Florida Transportation Council **Interlocal Agreement**

INTERLOCAL AGREEMENT CREATING THE SOUTHEAST FLORIDA

TRANSPORTATION COUNCIL FOR REGIONAL TRANSPORTATION PLANNING AND COORDINATION IN SOUTH FLORIDA

The duties of the SEFTC entity shall include the development of:

- a Regional Long Range Transportation Plan;
- a process for prioritization of regional projects:
- a regional public involvement process; and
- performance measures to assess the effectiveness of regional coordination activities.

In performing the duties of the SEFTC; agreement of all voting members shall be required for adoption of recommendations to the MPO's for inclusion in their



Guiding Criteria

Developed by Regional Transportation Technical Advisory Committee

- > Applicable/Compatible with LRTP process
- Readily available data
- Minimal staff time to calculate/report measures
- Easily replicable and simple to understand

Context Measures

CONTEXT 2006 TO 2010 2006 TO 2010 FIVE YEAR CHANGE FIVE YEAR TREND MEASURE Regional \$9B in the 2006-2010 TIP to \$11.2B in the 2010-2014 TIP Investments Regional From 5.46M people in 2006 Population to 5.58M people in 2010 From \$254B in 2006 to Gross Domestic Product \$256B in 2010 From 2.40M employees in Total Non-farm 2006 to 2.18M employees Employment in 2010 From 9,550 lane-miles in System Lane Miles 2006 to 9,764 lane-miles in 2010 From 34.8B miles/year in Vehicle Miles 2006 to 34.5B miles/year Traveled in 2010 From \$885M collected fuel tax sales in 2006 to \$831M Fuel Tax Sales collected fuel tax sales in 2010 From 2.3B miles/year in Truck Miles 2006 to 1.6B miles/year in Traveled 2010 Transit Revenue From 6.31M hours in 2006 to 6.37M hours in 2010 Hours From 4.50M vehicles in Vehicle 2006 to 4.19M vehicles in Registrations

2009



Performance Measures

REGIONAL PERFORMANCE MEASURES	2006 TO 2010 PROGRESS	2006 TO 2010 FIVE YEAR CHANGE**	2006 TO 2010 FIVE YEAR TREND
MOBILITY			
Time Spent Traveling (per capita)	•	From 0.59 hours in 2006 to 0.56 hours in 2010 (a 5% decrease)	
Truck Congestion Cost per Truck Mile Traveled*	•	From \$0.31/mile in 2007 to \$0.38/mile in 2010 (a 22% increase)	
Uncongested Peak Vehicle Miles Traveled per lane-mile	•	From 517 VMT/lane-mile in 2006 to 531 VMT/lane-mile in 2010 (a 3% increase)	•
Delay per Auto Commuter	•	From 44 hours/year in 2006 to 38 hours/ year in 2010 (a 14% decrease)	
Proportion of Travel Congested	•	From 43% in 2006 to 39% in 2010 (a 9% decrease)	



Performance Measures

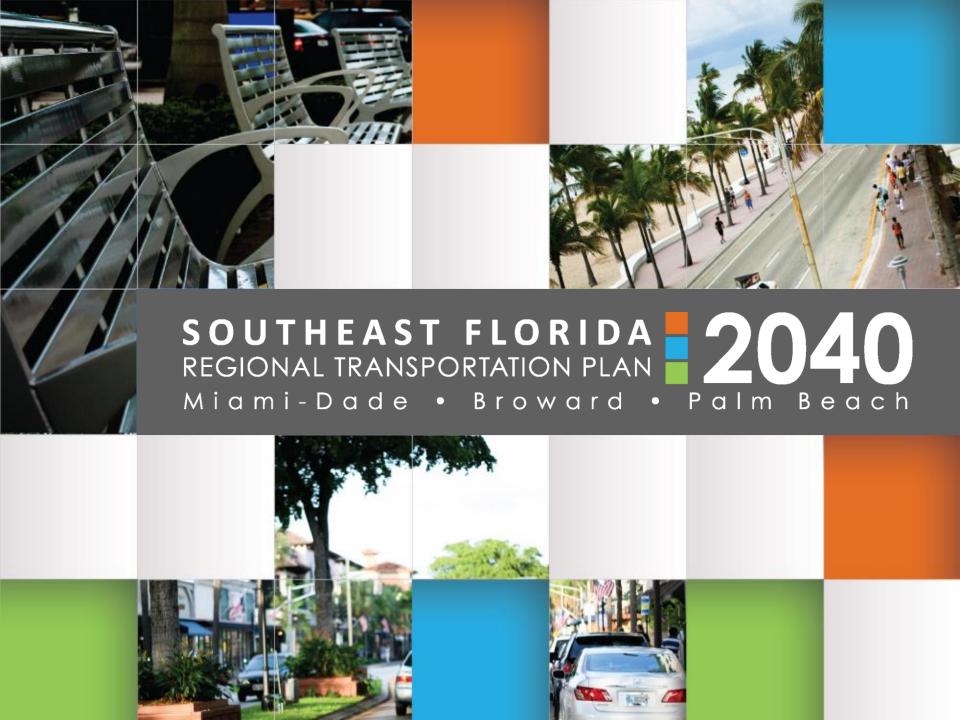
REGIONAL PERFORMANCE MEASURES	2006 TO 2010 PROGRESS	2006 TO 2010 FIVE YEAR CHANGE**	2006 TO 2010 FIVE YEAR TREND			
MULTIMODAL ACCESS & INTEGRATION						
Annual Transit Trips per Capita	•	From 29.4 trips/year/person to 26.9 trips/ year/person (a 9% decrease)				
Commute Mode Share	•	From 22.3% in 2006 to 21.4% in 2010 (a 4% decrease)				
Tonnage of Freight Goods Moving Through Ports	•	From 17.6 Million tons in 2006 to 15.2 Million tons in 2010 (a 14% decrease)				
ENVIRONMENTAL PROTECTION						
Regional CO ₂ Emissions*	•	From 30.9 Million metric tons in 2006 to 28.8 Million metric tons in 2009 (a 7% decrease)	•			



Performance Measures

REGIONAL PERFORMANCE MEASURES	2006 TO 2010 PROGRESS	2006 TO 2010 FIVE YEAR CHANGE**	2006 TO 2010 FIVE YEAR TREND
SAFETY & SECURITY			
Money devoted to the preservation and enhancement of evacuation routes	•	From \$424.7 Million in 2006 to \$491.7 Million in 2010 (a 14% increase)	
Number of crashes (fatal) per 100 Million Vehicle Miles Traveled	•	From 2.1 fatal crashes/100M VMT in 2006 to 1.5 fatal crashes/100M VMT in 2010 (a 31% decrease)	
Number of crashes (injury) per 100 Million Vehicle Miles Traveled	•	From 123.7 injury crashes/100M VMT in 2006 to 115.9 injury crashes/100M VMT in 2010 (a 6% decrease)	
QUALITY OF LIFE			
Percent of new housing built as attached units	•	From 58% in 2006 to 46% in 2010 (a 21% decrease)	
Vehicle Miles Traveled per gallons of fuel and diesel consumed	•	From 12.3 MPG in 2006 to 13.6 MPG in 2010 (an 11% increase)	•





SOUTHEAST FLORIDA REGIONAL TRANSPORTATION PLAN Miami-Dade • Broward • Palm Beach

Many Partners, one Unified voice

Metropolitan Planning Organizations

- Miami-Dade
- Broward
- Palm Beach

Department of Transportation

- Districts 4 and 6
- Turnpike

Regional Planning Councils

- South Florida
- Treasure Coast

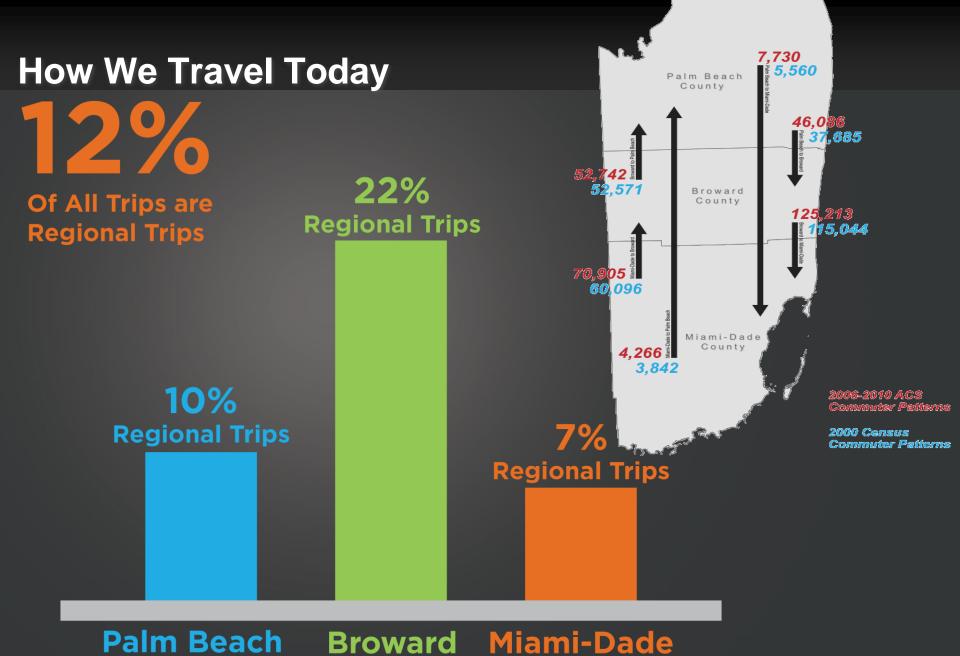
Transit Agencies

- MDT
- BCT
- Palm Tran
- <u>SFRTA</u>

One Vision Investing in Many Components

- Agreed to Goals and Objectives
- Identified regionally significant facilities
- Developed a Transit Vision
- Developed a Highway Network
- Identified Pedestrian & Bicycle Emphasis Areas
- Incorporates Freight Needs & Investments

2015 ADOPTION





Planning for the Next 25 Years

25% More People in 2040

+25%
Increase in
Population



5,514,3082010 Region Population

6,877,941
2040 Region Population



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Martin County Lake Okeechobee Palm Beach County **Broward County** Atlantic Ocean Roadway Rail Waterway Miami-Dade County SIS Corridor SIS Connector N/A Emerging SIS Planned Roadway Extension Minor Connection to Freeway/Expressway Minor Connection to Other SIS > 50.000 AADT > 50,000 AADT Connection Other Key Regional Connections Evacuation Route over (Extension of Source: Draft 2010 Functional Classification for EDOT District 4 and District 6 - May 9, 2013; Source: FDOT Central Office-SIS Facilities - April 2013 Freight Terminal Adopted Countywide Evacuation Routes - Miami-Dade County. Passenger Terminal

1. PRINCIPAL ARTERIALS

Definition: Interstate, Freeway/Expressway and all other Principal Arterials

Source: Draft 2010 Functional Classification for FDOT Districts 4 and 6, May 9, 2013

2. PLANNED PHYSICAL EXTENSIONS OF PRINCIPAL ARTERIALS

Definition: Interstate, Freeway/Expressway and all other Principal Arterials that are in the adopted LRTP Cost Feasible Plans for future expansion

Source: 2035 LRTP Cost Feasible Plan for Broward, Miami-Dade and Palm Beach County MPOs

3. STRATEGIC INTERMODAL SYSTEM (SIS) NETWORK

Definition: SIS and Emerging SIS Corridors, Hubs, Connectors, Railways and Waterways

Source: FDOT Central Office SIS facilities, April 2013

4. PRINCIPAL ARTERIAL CONNECTIONS

Definition: (1) Minor Arterials connecting to a Freeways/Expressways and/or SIS Corridors; (2) extensions of Principal Arterials that cross the intercoastal for evacuation purposes; (3) key connections of 'gaps' in the network; (4) Non-principal Arterials carrying 50,000 AADT or greater; and (5) extensions of facilities carrying 50,000 AADT or greater to complete a regional network connection.

Source: Draft 2010 Functional Classification for FDOT Districts 4 and 6, May 9, 2013; FDOT Central Office SIS facilities, April 2013; and Adopted Countywide Evacuation Routes – Broward, Miami-Dade and Palm Beach County.

Performance Assessment Requiring Various Tools, Utilizing Readily Available Data

- Travel Demand Modeling
 - Used in a Predictive Capacity
- Mobility Performance Measures
 - Used as a Monitoring Tool

South Florida Mobility Performance Measures Procedures from Source Book

- Sub-Task 1:
 - Data Collection.
- Sub-Task 2:
 - Test And Evaluate Performance Measures Extraction Information And Procedures In South Florida.
- Sub-Task 3:
 - Summarize The Performance Measures Extraction Procedures And Recommend Significant Travel Corridors.

South Florida Mobility Performance Measures Procedures from Source Book

Mobility Performance Measures

People

- Vehicle miles traveled
- % travel meeting LOS criteria
- Travel time reliability
- Vehicle hours of delay
- % miles severely congested

Freight

- Combination truck miles traveled
- Travel time reliability
- Combination truck hours of delay
- % miles severely congested



The Bigger Picture Connection

Strong Data & Performance Measures

Informed & Prioritized LRTP

Achieved Goals and Objectives

Thank you

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